

Feasibility Study for:

**Indiana State House
Museum, Visitor's Center & Gift Shop**

Prepared for:

**The Indiana General Assembly
Legislative Council**

In response to
Senate Bill 64, Section 2

Prepared by:

**Indiana Department of Administration
Public Works Division**

September 23, 2005

Legislative Directive: “study the feasibility, from a design, architectural, and engineering perspective, of renovating the first floor of the state house beneath the rotunda to accommodate a museum, visitor’s center, and gift shop.”

Current Occupancies in 1st floor below the rotunda (See Appendix A): The first floor of the state house beneath the rotunda is currently occupied as follows:

- Legislative Services Agency Storage: 718 SF
- MDF Room (Phone/ Data): 517 SF
- Supreme Court Storage: 865 SF
- Budget Storage & Chiropractor-for-the-day: 718 SF
- Total 2,818 SF

Potentially Available Square Footage (See Appendix B): It appears that all of the above could be relocated except the MDF Room, which may be reduced to 468 SF. A current air conditioning project in the Statehouse will require approximately 560 SF of this space for equipment to serve the rotunda above. It is anticipated that mechanical equipment to serve the Museum/ Visitor’s Center/ Gift Shop will be ceiling mounted and will not consume additional square footage. After removing partition walls, the available square footage for the museum project becomes 1,828 SF.

Access and Emergency Egress: The area under the rotunda is 2 steps (13.5”) above the surrounding first floor. A minimum of one handicapped accessible ramp will be required. In addition, a second, code compliant exit will likely be required depending on the final occupant load. For purposes of this study, it is assumed the occupant load will exceed 50, requiring a second exit (IBC 1004.2.1). Existing steps are inadequate. New steps will be required for code compliance at this second exit.

Facility Program Research: Telephone interviews were conducted with Representative Jim Buck and State House Tour Director Jennifer Hodge to assist in developing a facility program. Each of them offered thoughts for an “ideal” State House Museum, Visitor’s Center and Gift Shop. Web sites for other states were reviewed for similar program examples.

Both Rep. Buck & Ms. Hodge agreed that groups should enter through the first floor, west entrance. Rep. Buck would like to see models of each state house building. The history of these structures helps explain the progress of the State of Indiana. He has been told of historic fixtures from the current State House that could be collected and displayed. One historic photo shows a horse-drawn carriage entering the building from a tunnel to the north. Rep. Buck noted students might enjoy seeing a buggy displayed in its historic location on the first floor. Rep. Buck suggested that the tour office take the lead in explaining how an Indiana State House Museum, Visitor’s Center and Gift Shop could help welcome visitors to and through the State House.

Ms. Hodge explained the process of gathering tour groups (many as large as 150) for a brief talk before leading them through the building. The tour office conducts 10 – 12 tours a day, January through May. Fourth graders throughout the state visit in April and

May as they study Indiana history. Ideally, groups would gather in an assembly space to watch an introductory film before heading out for the tour. This should be close to restrooms and coat/ lunch storage that can handle 120 – 150 people. The museum and gift shop should also be able to handle that many people.

Many of the ideas shared by Rep. Buck & Ms. Hodge would require space considerations beyond the area below the rotunda. Therefore, this study attempts to meet the spirit of their collective vision within the space constraints identified by the legislative directive. Two options were considered: Option A includes assembly space (seating 60). Option B has a larger space available for museum and gift shop and no assembly space. In option B, the tour office would have to continue their current practice of utilizing whatever space they can find for an introductory talk. Options A & B are not designs but are illustrations of what may be possible in the area below the State House rotunda. The following are Facility Program considerations:

Architectural Issues:

- Area for arrival of guest groups: proximity to restrooms, coat/ lunch storage and vertical circulation
- Clear way-finding: intuitive path from the west entry to the Visitor's Center
- Code Issues (Indiana Building Code, 2003 edition):
 - ADA Compliance: level change required at this location
 - Two means of egress required if >50 people
 - Occupancy and Occupancy Limits:

Statehouse is business occupancy	B:	100 GSF/ person
Museum is Assembly 3	A3:	7 GSF/ person
Assembly Space is Assembly 3	A3:	7 GSF/ person
Gift shop is Mercantile	M:	30 GSF/ person
 - Occupancy Separation: Museum and Assembly space must be less than 750 SF or a 2 hour occupancy separation will be required.
- Ceiling height: Existing building piping and wiring must remain above new ceiling. Typical ceiling height could be around 10' with bulkheads below that as required to accommodate ductwork for this project and the rotunda air conditioning project.
- Security: Lockable entry/ exit doors, lockable coat rooms, maximize staff visibility, museum-specific cameras & monitor as required.
- Layout for Minimal Staffing
- Alternate locations will likely be required for proposed displaced occupants. This study does not address any alternate locations.

Mechanical:

- The State House Museum, Visitor's Center, and Gift Shop can be heated and cooled with a 4-pipe fan coil system (2 new units) above a suspended ceiling with concealed ductwork for air distribution. Chilled and hot, heating water piping can be tied into existing mains already present in the space above the ceiling. Condensate pumps can be used to divert the condensate to a nearby drain.

- Changing occupancy from its current “storage” to an occupant load of 140 - 155 people will require a significant amount of fresh, outdoor air. This is a code requirement and an absolute must for safe occupancy. This will provide needed oxygen and offset the carbon dioxide produced by this many people. A phased project is underway to air condition the State House, with 100% completion anticipated in 2009. At that time, it will be possible to duct the required outdoor air to this space from above the ceiling of the adjacent corridors to ceiling diffusers in these spaces. Fresh air required for this Museum will increase the needed chase for outdoor air intake by 1.4 sq. ft. in 2 different quadrants of the building. This chase is already planned to run vertically from the attic to the first floor as a part of the current HVAC project. Option A will require 2310 cubic feet per minute (CFM) of outdoor air via 2.8 square feet of duct from over the corridors. Option B will require 2100 CFM using 2.8 square feet of duct from the corridors.
- If this space will house artifacts that require special temperature and humidity conditions, concealed fan coil units above the ceilings cannot be used. An equipment room would have to be dedicated for humidity controlling equipment. This would decrease floor area available for occupancy, require domestic water piping, and may require floor drains to be cut into the floor, and run to the nearest drain, depending on location of the equipment room. Given that there is not enough space under the rotunda to accommodate the number of people identified by the tour office, this study assumes there is inadequate space for the additional mechanical room that “museum-artifact-quality mechanical equipment” will require. Therefore budgeting for “museum-artifact-quality mechanical equipment is not included in the budget numbers provided below.

Plumbing:

- Changing storage to occupied space under the rotunda adds 140 – 155 people to the building, requiring additional restroom facilities. There is no space under the rotunda to accommodate this need. One toilet and one sink for men and two toilets and one sink for women will need to be added to the first floor outside of the rotunda space.
- There is no fire sprinkler system in the current State House and none is anticipated for this project

Electrical:

- Electrical Service and Distribution
- Room lighting and modest Exhibit Lighting
- Fire Alarm
- Voice and Data wiring and outlets
- Cameras & Monitor

Project Budgets (excluding exhibits):

Component Description	Option A	Option B
West entry ramp and stairs:	\$29,000	\$29,000
• Demolition:	\$ 2,000	

- Entry ramp, stairs & rails \$12,000
 - Signage \$ 5,000
 - Entry doors and hardware: \$10,000
- \$29,000

Interior space:

- | | | |
|------------------------------------|-----------|-----------|
| • Demolition: | \$ 5,000 | \$ 4,000 |
| • Flooring: | \$ 12,500 | \$ 12,500 |
| • Ceiling: | \$ 6,000 | \$ 6,000 |
| • Walls: | \$ 10,000 | \$ 8,000 |
| • Interior Doors: | \$ 2,180 | \$ 545 |
| • Reception/ check-out counter: | \$ 5,000 | \$ 5,000 |
| • 60 Stacking Chairs @ \$100 each: | \$ 6,000 | \$ 0 |
| • Overhead digital projector: | \$ 3,000 | \$ 0 |

Exit door, stairs, rails, corridor treatment: \$ 2,000 \$ 2,000

Mechanical: \$ 35,000 \$ 35,000

Plumbing (Restrooms required but no room): \$ 0 \$ 0

Electrical: \$ 19,345 \$ 19,345

- | | |
|-------------------------|---------------|
| Service & Distribution: | \$ 2,742 |
| Lighting: | \$ 1,828 |
| Devices: | \$ 1,371 |
| Equipment Connection: | \$ 1,737 |
| Basic Materials: | \$ 3,565 |
| Fire Alarm: | \$ 1,188 |
| 2 cameras & 1 monitor: | \$ 6,000 |
| Voice/ Data: | <u>\$ 914</u> |
| | \$19,345 |

Lighting Wattage: 4,570 watts

Device Wattage: 3,656 watts

Subtotal	\$135,025	\$121,390
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Contingency @ 20%	\$ 27,005	\$ 24,278
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Total Budget Option A: \$161,030 Option B: \$134,668

Add Alternate to control corridor noise: \$25,000

Additional Restroom Facilities on 1st floor: \$30,000 - \$50,000 depending on scope

Summary: Approximately 1,828 square feet can be made available for a State House Museum, Visitor's Center and Gift Shop. This is not enough area to accommodate the number of people/ tour sizes currently being served by the tour office.

Options A & B show what is possible, per code, with the space under the rotunda. These options require the following to happen. Present occupants must be relocated. A ramp will be required which is anticipated to displace 1 1/2 of the west, press booths. Acoustic separation (corridor walls and doors) may be required to isolate the tour group noise from press booths. Outdoor fresh air must be provided by a separate phased State House air conditioning project that is not slated to be complete until 2009. There may be an opportunity to move the project which would serve this area into to an earlier phase.

Additional restrooms must be added to the first floor to accommodate this increase in demand. There is no space under the rotunda to accommodate this.

This is a small step toward making the State House more welcoming. It does not address all of the practical needs of a State House Museum, Visitor's Center and Gift Shop, therefore IDOA – Public Works Division recommends against efforts to fit all of these functions into this limited square footage. At best, a gift shop with a maximum of 60 patrons at a time can be accommodated under the State House rotunda.

Appendices:

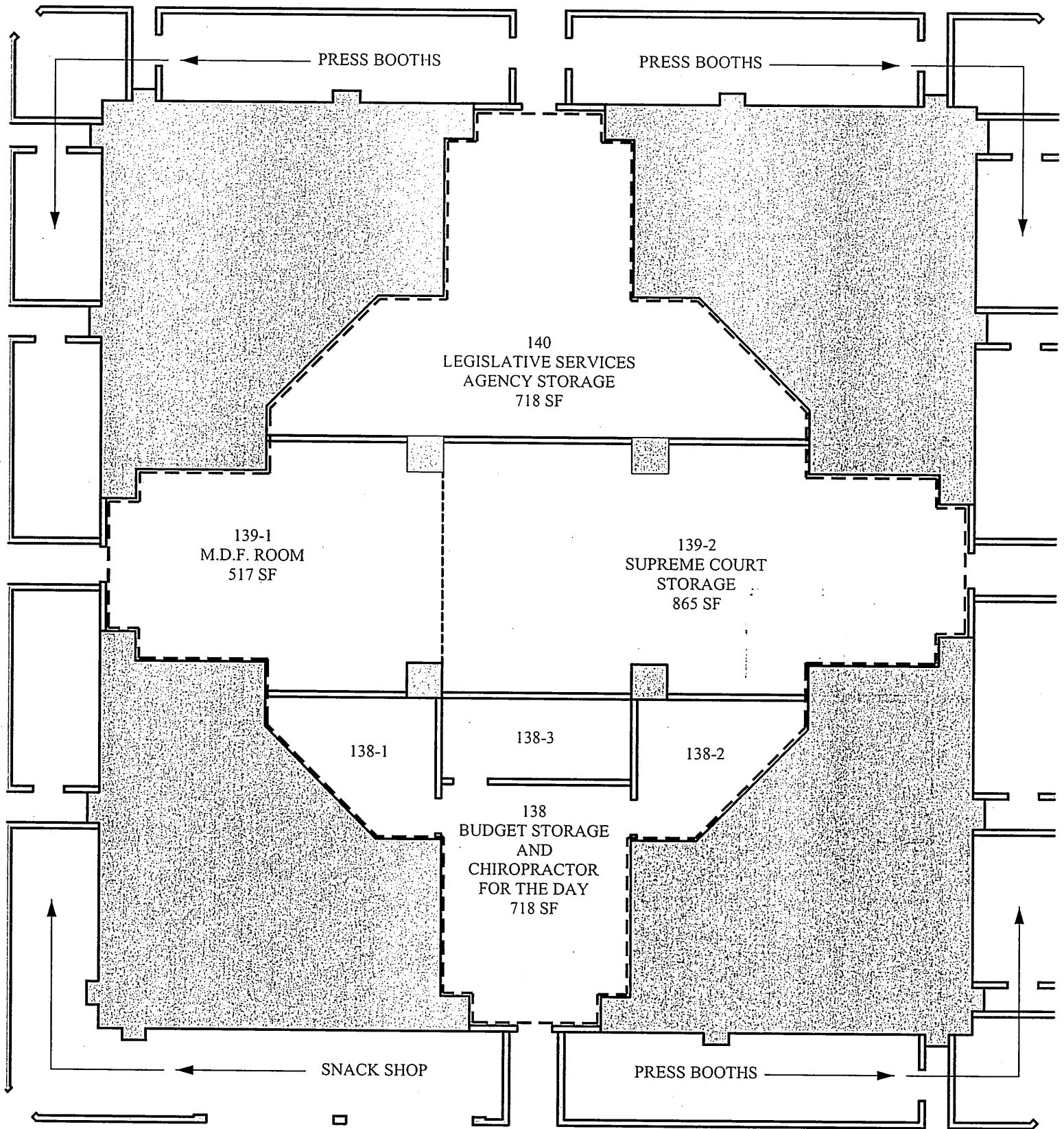
1. Current First Floor Occupancies - Below the Rotunda
2. Potentially Available Square Footage
3. State House Museum, Visitor's Center & Gift Shop: Option A
4. State House Museum, Visitor's Center & Gift Shop: Option B

Acknowledgements:

Jim Buck, State Representative
Jennifer Hodge, State House Tour Director
L. Thomas Coulter, Director, Public Works Division
William Valentine, IDOA Facilities Management Division

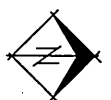
IDOA – Public Works Division Project Team:

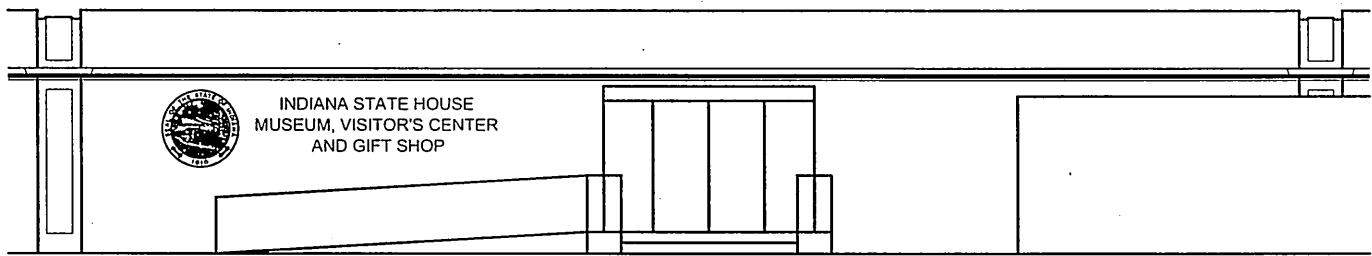
Bonnie Sheridan Coghlan, Associate State Architect
Todd Lackey, Assistant State Engineer
J. Andrew Corbin, CADD Systems Operator



Appendix 1 Current First Floor Occupancies - Below The Rotunda

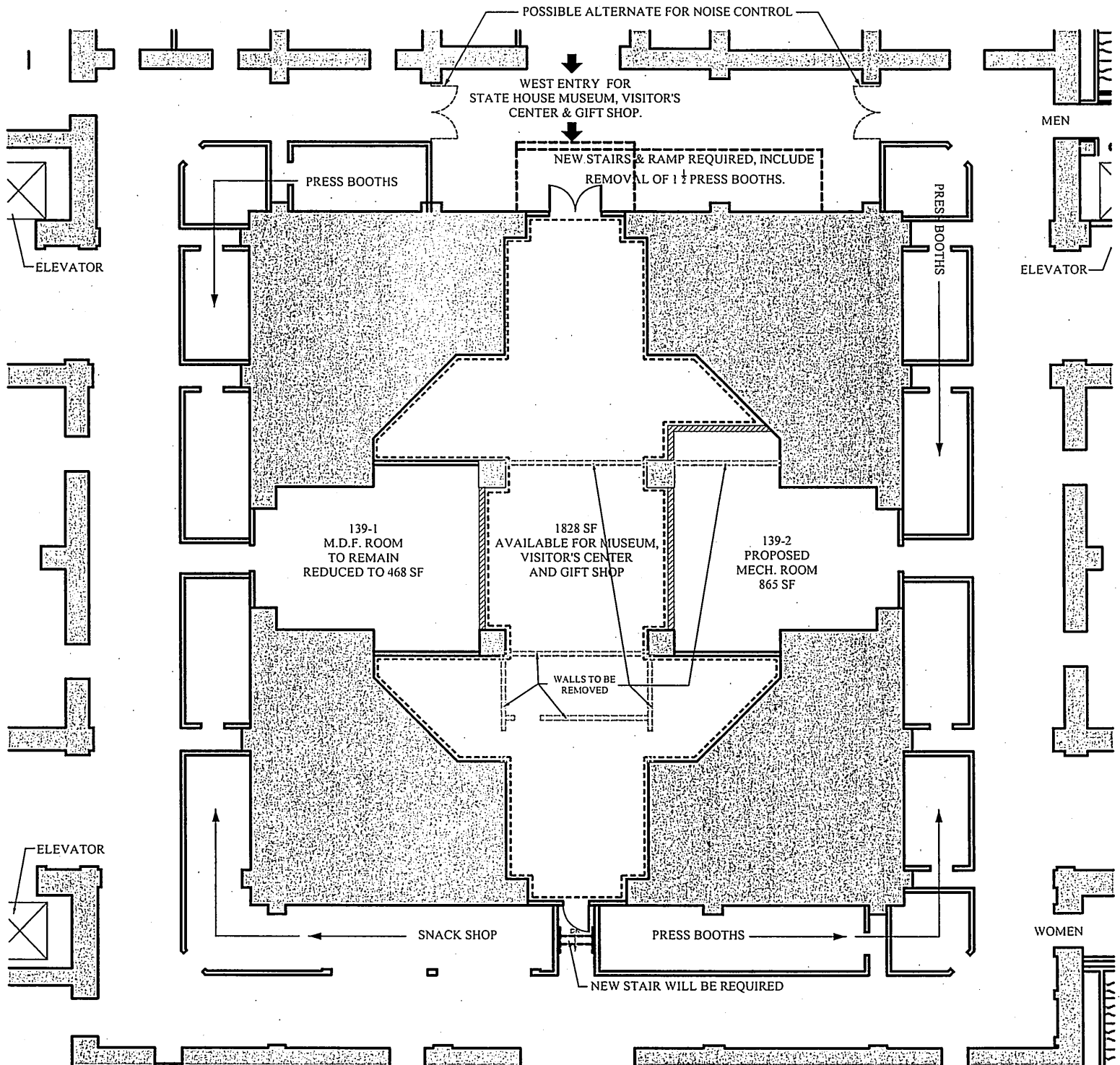
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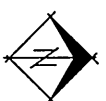
ELEVATION OF POSSIBLE ENTRY & ADA RAMP

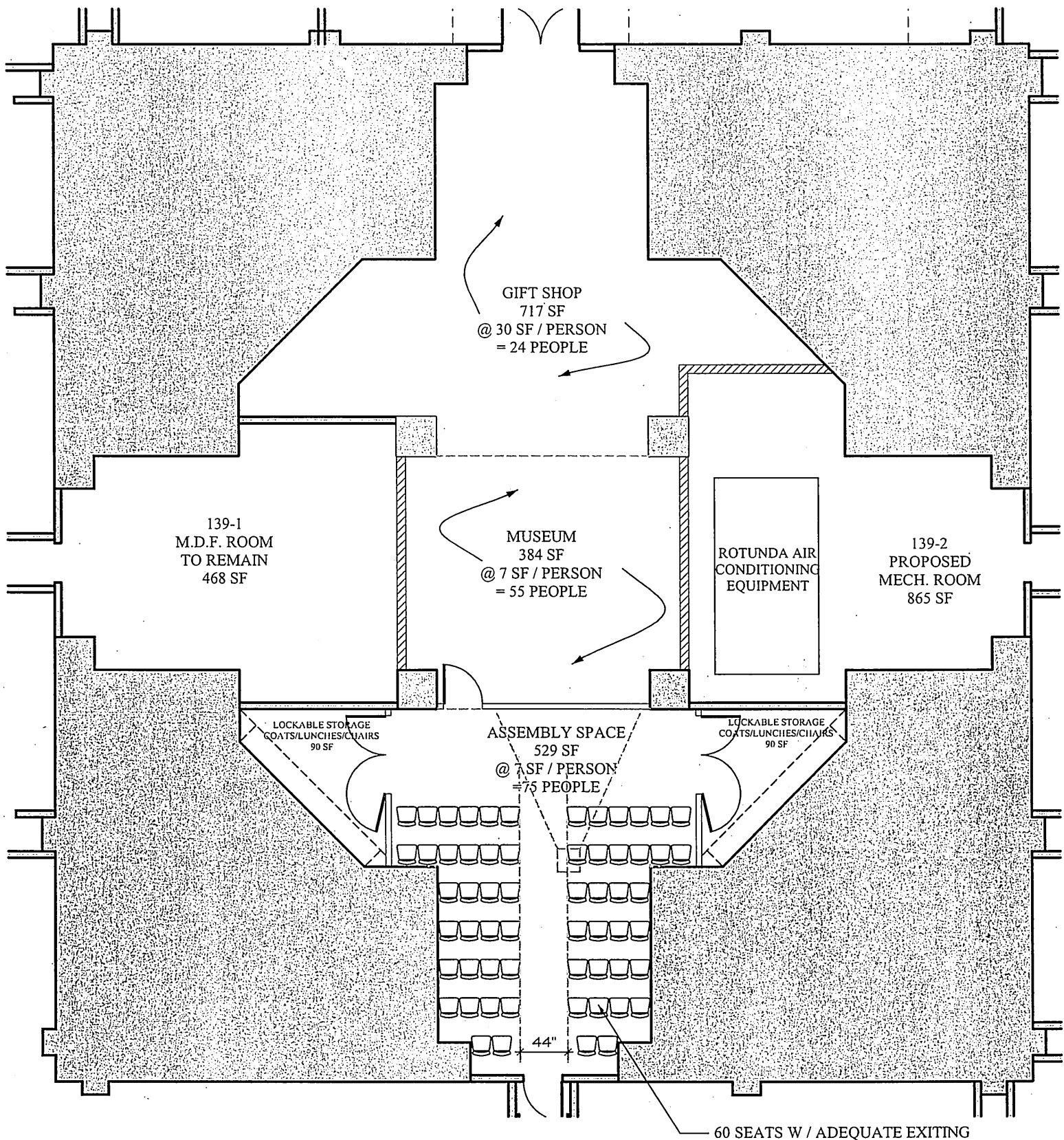
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Appendix 2 Potentially Available Square Footage

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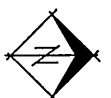


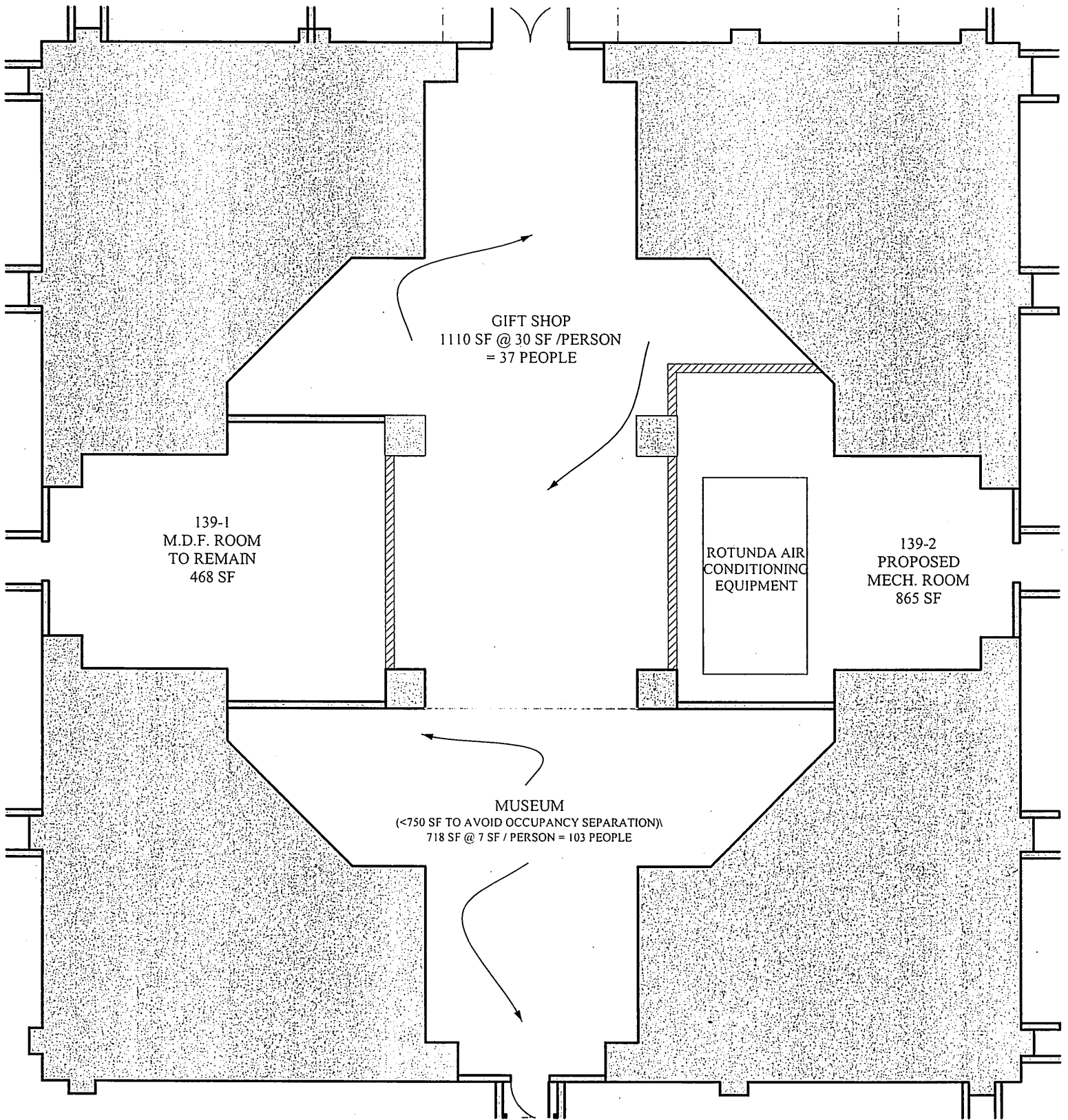


Appendix 3

State House Museum, Visitor's Center & Gift Shop: Option A

DO NOT SCALE





Appendix 4
State House Museum, Visitor's Center & Gift Shop: Option B.

DO NOT SCALE

